R E P O R T R E S U M E S

ED 018 109 64 EM 000 823

A STUDY TO DETERMINE THE FEASIBILITY OF DEVELOPING A COORDINATED DISTRIBUTION SYSTEM FOR AUDIO TAPE RECORDED MATERIALS. FINAL REPORT.

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REPORT NUMBER BR-5-1157 PUB DATE 30 JUN 67
CONTRACT OEC-4-6-051157-1635
EDRS PRICE MF-$0.25 HC-$1.08 25P.

DESCRIPTORS- *FEASIBILITY STUDIES, *DECENTRALIZED LIBRARY SYSTEM, *QUESTIONNAIRES, *TAPE RECORDINGS, *INSTRUCTIONAL MATERIALS CENTERS, SYSTEMS APPROACH, MODELS, PRIVATE SCHOOLS, PUBLIC SCHOOLS, HIGHER EDUCATION,

THIS DOCUMENT REPORTS DATA OBTAINED FROM ALMOST 50 PER CENT OF 741 QUESTIONNAIRES ON TAPE USE AND DISTRIBUTION SENT TO ALL UNITED STATES AUDIO TAPE LIBRARIES IN PUBLIC, PRIVATE, AND "PROGRESSIVE" SCHOOLS. ON THE BASIS OF THIS FREQUENCY DATA, RECOMMENDATIONS ARE MADE AND FUNDS REQUESTED FOR ESTABLISHING A MODEL FOR A NATIONAL TAPE DISTRIBUTION SYSTEM WITH AUTONOMOUS REGIONAL CENTERS. (LH)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FINAL REPORT

U.S.O.E. Contract OEC 4-6-051157-1635

Title: A Study to Determine the Feasibility of Developing a Coordinated Distribution System for Audio Tape Recorded Materials.

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Date: June 30, 1967

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The Study

The objectives and procedure to be followed were described as follows:

Objectives:

The objectives of this study are as follows:

A. To identify all of the tape libraries and repositories in the United States which are making audio tape recorded materials available to teachers in public and non-public schools.

B. To identify the basic problems encountered by these libraries and repositories in the acquisition, selection, evaluation, duplication, and distribution of audio tape recorded materials.

C. To prepare recommendations relative to the solution of these basic problems.

D. On the basis of objectives A,B, and C, to develop guidelines useful in the establishment of new tape libraries and repositories.

E. To determine the feasibility of developing a coordinated distribution system for audio recorded materials.

F. To make recommendations regarding a national plan for a more effective method of procuring, evaluating, duplicating, and distributing audio tape recorded materials, except those mentioned below.

This study will include all types of audio recorded tape materials used in elementary and secondary schools, as well as those used for higher education and adult learning, except foreign language taped materials. Because of the highly specialized nature of these recordings and the current work being conducted in this area by Modern Language Association and the Center for Applied Linguistics, it is believed that this area is being adequately covered.

Procedure:

This study will be conducted in two phases and will require twenty-six months to complete. The work accomplished under this contract will cover Phases I only. Funding for Phase II will be

requested at the completion of Phases I.

The principle investigator will employ the appropriate personnel and take major responsibility for developing the plan, approving the procedures for gathering data, conducting conference meetings, and preparing status reports, guidelines for the development and operation of tape libraries, final conclusions, and recommendations.

To accomplish the objectives of Phases I, the Contractor will carry out the following procedures:

A. Identify, through correspondence with existing tape libraries, repositories, audio equipment and tape manufacturers, state departments of education, and other reliable sources, all of the tape libraries and repositories in the nation which make audio tape recorded materials available to teachers.

B. Develop a draft questionnaire which will seek to identify pertinent characteristics of audio libraries and problems involved in the location, selection, evaluation, duplication, and distribution of audio tape recorded materials for educational purposes.

C. Assemble a two-day conference in Boulder, Colorado of fifteen knowledgeable people in the audio field. These people will be selected from colleges and universities, state departments of education, large school districts, professional tape duplicating companies, audio tape manufacturers, and similar related areas. It will be the purpose of this conference to:

    1. Evaluate the draft questionnaire for potential effectiveness.
    2. Revise and refine items to be included.
    3. Review the listing of tape libraries and repositories previously compiled.
    4. Identify the population to be surveyed.
    5. Recommend any necessary changes in the date collecting plan of operation.

D. Develop an intermediate draft of the questionnaire and pre-test it with five representative tape libraries or repositories.

E. Revise the intermediate draft of the questionnaire and submit it to the conferees mentioned above by mail for final review. It will then be sent to the U. S. Office

of Education for approval and clearance.

F. Send the questionnaires to the pre-selected population to be surveyed.

G. Tabulate the results of the returned questionnaire.

H. Conduct personal visitations to several outstanding tape libraries and repositories for a first-hand evaluation of acquisition, selection, distribution, shipping, storage systems. Data from these evaluation tours will be used in the preparation of the Guidelines for the establishment of new tape libraries and repositories.

I. Hold a three-day evaluation conference with a small group of five of the key participants who attend the conference mentioned in item C above. It will be the purpose of this conference to:

1. Review the results of the questionnaire survey.
2. Identify basic problems encountered by tape libraries and repositories in the acquisition, selection, evaluation, duplication, and distribution of audio tape recorded materials as a result of the replies received.
3. Prepare Guidelines for audio tape libraries which would include:
   (a) How to establish and operate a magnetic tape library.
   (b) Problems encountered in existing tape libraries and recommendations regarding how they might be overcome.
   (c) A listing of the existing tape libraries, including location, size of the collection, procedure for requesting tapes and other vital data.
4. Make recommendations regarding items to be included in the final report relative to the feasibility of developing a coordinated distribution system for audio recorded materials.

J. Prepare a draft of the final documents to be submitted to the U. S. Office of Education and submit them to the conferees mentioned in item C above for their suggestions and recommendations.

K. Prepare and distribute the final report, which will

include:

1. Guidelines for audio tape libraries.
2. The feasibility of developing a coordinated distribution system for audio tape recorded material.

The above procedures were followed as described below in an endeavor to achieve the stated objectives.

Procedure A:

Appendix A (Letters) was sent to all educational institutions that were noted by manufacturers or suppliers, state departments of education, and tape library records as having an audio tape collection. The response to this inquiry contained seven hundred forty (740) indications of collections across the country. The questionnaire described below was sent to each. As a result of the returns, nearly three hundred (300) collections have been noted of various sizes. All of these latter audio tape libraries' addresses have been put on key-punched IBM cards for ready reference.

Appendix B is a list of the audio tape libraries containing collections of five hundred (500) or more audio tapes. This list has been incorporated in the Guidelines for Audio Tape Libraries referred to later in this report.

Procedures B, C, D, and E:

These procedures are described in detail in earlier reports. A questionnaire was developed by the project staff. This instrument was evaluated by the conference of fifteen people knowledgeable in the audio tape field. Revisions in the rough draft were made on the basis of the conference. This group decided that all existing educational audio tape libraries should be surveyed. It was determined that a sample should be made from "progressive" public schools.

The questionnaire was pre-tested with six audio tape libraries and modified accordingly. This revised questionnaire was submitted to and approved by the U. S. Office of Education. It is Appendix C of this report.

Procedures F and G:

As of this writing the following table describes the overall returns for the questionnaire.

TABLE I - Audio Tape Libraries

Number sent . . . . . 741 Number returned 350

Catogories of respondees	Number returned
Higher Education	146
Public Schools	126
Educational Radio Stations	24
State Departments of Education	3
Other government agencies, individuals, and special schools	5
Number returned unanswered*	46

(* The usual note attached indicated that they did not maintain an audio tape library of any significance.)

Due to the length of the questionnaire and the uncertainty of the existence of audio tape collections for the population surveyed, the 49% return is considered to be good by the project staff.

The tabulations of the responses for the items on the questionnaire are included with Appendix C. The reader is referred to this data in relating to the following observations on the results for these questions. The sequence of the questions as they are on the questionnaire will be followed.

I. Library Size: The following chart lists the number of respondees according to the size of their audio tape collection.

0 to 200 tapes	_____	0 to 200 disc recordings	____
201 to 500 tapes	_____	201 to 500 disc recordings	____
over 500 tapes	_____	over 500 disc recordings	____

It should be noted that respondees were asked <u>not</u> to include foreign language or music recordings.

II. Sources:

A. By far, the largest number of respondees indicated that at least 20% of their collection consisted of audio tapes produced by persons associated with the programs of their individual institutions. This kind of recording is also indicated by the largest number of respondees as the source of over 60% of their collection. It is also noted that thirty-one (31) libraries have collections with over 60% of the programs being designed locally for broadcasting.

B. Responses to the percentage of other non-commercially produced programs indicates 20% or less of most collections are from outside sources. No more than thirteen (13) libraries said that over 60% of their collections came from the sources listed. The inference is that most audio tape programs of a non-commercial nature are being produced locally.

III. Evaluation:

A. There is no formalized form used for evaluation by two hundred fifty-one (251) of the libraries. Only thirty-six (36) indicated such a form existed, of which the project staff received four (4) samples.

B. The greatest number of libraries evaluated programs via individual teachers or supervisors and library staff. Since two hundred ninety (290) respondees were checked for these techniques and only thirty-six (36) were employing formal forms, it is indicated that the evaluation tends to be of an informal nature.

C. The use or requests made for a given tape program along with technical quality seems to be of the most concern for the largest number of libraries.

D. Instructional value is given by the large majority, two hundred nineteen (219), of libraries as the criteria for inclusion of a tape in their library. This correlates with the responses, one hundred eighty-six (186), noted for evaluation by teachers or supervisors.

E. Technical quality was a criteria in one hundred forty-six (146) cases and reliance on the source noted in one hundred nineteen (119) returns.

IV. Cataloging:

A. There are only three (3) libraries noting the cost of their catalog, thus we do not have a real idea of the cost factor.

B. Distribution of catalogues is most limited as noted by the number of libraries who restrict distribution to their institution, one hundred thirty-five (135), or with in their state, sixteen (16). Only twenty (20) libraries, at most, indicated that they distribute catalogues outside their state, six (6), or across the nation, fourteen (14).

These results tend to verify the concern of libraries and schools for locating audio tapes. They can be interpreted as pointing up the need for an organized distribution system.

C. The few libraries (5) noting a charge for their catalogue provide an average charge of $1.80.

D. The indexing for audio tapes is predominantly by title (141) and by subject area (107). The most preferences (49) recorded were for subject area indexing, followed in numbers by grade level (22), learning objectives (20), title (17), and producer (13).

E. Coding was indicated for most (71) to be of a system other than those listed. The implication is that these libraries have set up their own numerical codes for internal records. This is substantiated by a similar number (18), indicating an alpha number for coding.

In terms of preferences indicated, most marked the *Dewey* Decimal System (22) or the Library of Congress system (16). Visitations to libraries for elaboration on this point was possible and indicated a preference for the Library of Congress system for customer use, and a number code of individual design for internal use.

F. Most responses (42) indicated a data processing technique other than those listed. Since descriptions were not given the staff is at loss as to other data processing techniques employed. It is assumed that data processing is not used by these respondents.

For those checking the listing, most (22) indicated they were using punched cards and this was the greatest preference (18) for those checking the prefer column.

It is noteworthy that seven (7) checks were made to indicate that magnetic tape was used. Twelve (12) respondees listed this means as being preferable.

G. One hundred twenty-four (124) respondents indicated that they had a listing of programs. There were ninety-two (92) checks for having a catalogue.

The largest preference checked was for a catalogue, as opposed to a list, by thirty-five (35) of the libraries. Fourteen (14) noted a preference for a list.

H. Responses showed a heavy reliance on mimeographed or spirit duplication (81) for printing "catalogues" followed by offset press (47). The preferences indicated were very close for computer printout (27) and the offset press print (30).

I. & J. Although no times were noted, most respondents (49) indicated catalogues were printed at time intervals other than those listed. It is assumed that the time between catalogues is longer than three years. Thirty-five respondents indicated an annual catalogue and twenty-eight (28) checked a biennial catalogue. The preferences were for either an annual (29) or a biennial (23) catalogue.

Most supplements are noted to be printed annually (45) although (38) checks were given for others, which is assumed to indicate longer than a years lapse between printings. Twenty-three (23) responses showed a preference for a monthly supplement and twenty (20) for a semi-annual supplement.

K. The responses to indexing are fairly evenly divided for alphabetical (82) and subject (84) with a slight edge noted in preferences for subject (26) as to alphabetical (18).

V. Financing:

A. Operating Budget: One hundred sixty-five (165) respondees indicated that funds were provided to operate their libraries in part from their institutional budget. Of these, ninety-seven (97) designated that 100% of their funds were budgeted. Twenty (20) noted that they were 100% self-supporting. Only six (6) noted that their library collection was fully supported by federal funds listed, while a total of eighty-three (83) libraries indicated some federal support, fifty-seven (57) of which were checked for 20% or less.

The budgets for the top ten averaged $59,000.00 per year and for the top twenty the average budget was $35,000.00 per year.

B. Purchase and payment for cost of duplicating was given by three hundred eleven (311) respondents as the means of collecting some portion of their library. Of this number, one hundred fifty-five (155) secured over 60% of their collection by this means, compared to thirty-seven (37) who indicated acquisitions free of charge and

six (6) on an exchange basis.

C. Only three libraries indicated that royalties were involved and for four hundred thirty-five (435) tapes, of which four hundred (400) were located at one school.

D. Distribution of duplicates: Most distribution of tapes was noted to be within a state of two hundred thirty-five (235) libraries of which one hundred eighty-nine (189) limited distribution to their institution. Only twenty-eight (28) libraries checked that they distributed duplicate tapes outside their state boundaries. Of the 189 libraries limited to distributing within an institution, one hundred fifty-nine (159) noted that there was no charge involved, while for those (60) distributing outside their home state only seventeen (17) indicated that they did not charge for this service.

The source of tape used for duplicates was about equal between the user supplying the tape and the library supplying the tape.

E. The responses (46) as to the amount charged for duplicating indicates a median charge of $1.00 for a fifteen minute tape.

Questionnaire - Section II - Technical

I.

A. Environmental control: A greater number of respondees do not have humidity control (166) compared to those that do (50). One hundred twenty-three (123) noted they could control temperature while one hundred five (105) claimed they could not. Although wooden shelves are recommended, one hundred fifty-seven (157) indicated use of metal shelving, while one hundred four (104) were using wooden shelving.

B. The answers as to the speed of recording for master tapes showed one hundred two (102) libraries were equally split between 3 3/4 i.p.s. and 7 ½ i.p.s. Twenty-one indicated higher speeds were used while thirteen (13) were using 1 7/8 i.p.s. recording speed for masters.

Duplicate speeds noted are also about equal for recording speeds of 3 3/4 i.p.s. (135) and 7 ½ i.p.s. (146). Twenty-nine (29) indicated that they had made duplicates at 1 7/8

i.p.s.

C. Most respondents (35) marked full-track as the configuration for masters, while twenty-one (21) marked dual-track. The half-track or dual-track configuration for duplicates was noted for thirty-five (35) libraries.

D. Very few libraries (13) noted the use of bulk tape while one hundred seventy-six (176) indicated they used new tape on reels. The use of used tape was indicated by seventy-four (74) libraries.

II.- III.

The make and model of recording and duplicating equipment was noted for the sixteen (16) largest college libraries. The indications for maintenance procedures were scrutinized for these libraries. Twelve of these libraries indicate by their responses to have equipment and maintenance procedures that would allow them to produce quality audio tape programs.

Questionnaire - Section III - Directions for Future

I. Sixteen (16) libraries (none of the 16 large university libraries) said they duplicated cartridge tapes while two hundred thirty-three (233) responded negatively. No indications were given as to the kind of equipment employed.

II.

A. Areas that most respondees saw as increasing in use of audio tapes were at the elementary, secondary, and four-year college levels. This increase was noted to be between 25% and 50%.

The number of libraries experiencing at least a 25% increase for various grade levels is given in the following table.

Pre-school	9	Four year college	52
Elementary	80	Graduate	15
Secondary	62	Adult	13
Two year college . .	17		

The number of libraries that considered the following factors a medium or large detriment (as opposed to small or none) to the use of audio tapes for education are given in the following list.

	M-L	S-O
Lack of program sources	131	83
Lack of information about programs . . .	182	48
Lack of appropriate programs	160	55
Lack of knowledge on how to use tapes . .	157	72
Lack of equipment	70	144
Unwillingness of educators	130	96

The biggest overall concern is for information and appropriate programs.

D. The response to the question concerning the best role to be served by state education departments, regional universities, and a national distribution center, as determined by the number of responses of best or O.K. as opposed to poor or bad, in their role as (1) clearing house for information, (2) forwarding service for tapes, (3) duplicating service, (4) single subject center for tapes, or (5) an evaluation center, are listed below:

	State Education Department		University		National Center	
	Good	Poor	Good	Poor	Good	Poor
(1) clearing house	138	34	125	30	29	9
(2) forwarding service	76	67	107	45	159	26
(3) duplicating service	97	60	125	36	114	45
(4) single subject center	47	99	78	69	53	76
(5) evaluation center	124	39	115	28	128	30

E. The number of positive responses as to whether or not libraries would make duplicates available to a national distribution center was two hundred seven (207) positive and thirty-nine (39) negative.

F. The preference for making duplicates available was noted to be on an exchange basis .

G. One hundred sixty-nine (169) were in favor of distributing a national catalog with their library identified on the cover while sixty-two were opposed.

H. & I. One hundred eighty (180) said they would consider listing their tapes in a catalog distributed by a national center. Forty-six (46) libraries were opposed.

The preference was for a catalog indexed by subject areas (107) or a catalog containing both a subject area index and an alphabetical list (115).

Four open-end questions were posed for comment by the recipients of the questionnaire. The responses have been accumulated as they were received and are listed as Appendices as indicated.

Appendix D replies to "the impact likely on the use of audio tapes by (1) individualization of instruction and/or (2) independent study and/or (3) random (dial) access systems and/or (4) computer assisted instruction for your area of service."

Appendix E replies to "comments and ideas concerning a national distribution system for audio tapes."

Appendix F comments on "the need for a national catalog of audio materials and/or a single coding system."

Appendix G comments on "possible ways of handling copyrights."

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A modification of the above questionnaire was designed for "progressive" or "light house" public schools. This instrument went through the same procedures as did the questionnaire referred to above.

The "light house" schools were selected from the lists published by "Project Discovery," by the Institute for Development of Educational Activities and those made known to the staff by various conference representatives.

Of the eighty-four questionnaires sent, thirty-one (31) were returned. The responses for each of the questions are given in Appendix H. The following references are related, question by question, to those in the questionnaire itself.

I.

A. The responses as to the number of tapes being used at the grade levels listed reveals the greatest use (14 to 20 schools) at elementary and junior high levels. At these levels five schools noted they were using over a hundred tapes.

   Twenty-four (24) respondents indicated they were using a few tapes (less than 20) for groups other than those listed but did not write in the specifics.

B. Recipients were asked to indicate areas identified with utilization of audio programs and to note those that

should, in their opinion, be included in a catalog description. The greatest number of checks for any one designation was five (5) for utilization which was to indicate that the grade level or subject was identified for tape programs used in these schools.

The largest number (14) checked a request for designation in catalogs for achievement level followed by seven (7) and eight (8) responses for I.Q. level and enrichment value.

C. & D. Thirteen (13) schools noted they used a system of evaluation for audio programs. Five of these schools indicate they have standing committees to evaluate tape programs and the others seem to rely on the reaction of teachers, and, in a couple of instances, supervisors for comment.

II.

A. The number of non-commercial catalogs on hand for twenty-two schools was designated at one or two, with eighteen of these consisting of catalogs of less than one thousand (1000) titles.

B. & C. Just over half (16) of the respondents indicated they had a National Tape Repository Catalogue and of these, eleven (11) had secured the last supplement.

D. Seventeen (17) schools replied that they had a catalog of tapes for distribution within the system, while thirteen (13) do not have such a listing.

III.

A. When asked whether or not an increase in use of audio tape is foreseen, only one district replied in the negative.

B. The areas of predicted increased use of at least 25% to over 100% were, for over half of the respondents, deemed to be for enrichment (20), for independent study (26), for individualized instruction (23), and for remedial programs (17). Fifteen schools estimated an increase in use of over 25% for advanced programs and fourteen for regular classroom instruction.

The grade levels checked for at least a 25% increase in use of audio tapes in order of the greatest number of

schools responding were junior high (18), senior high (18), intermediate (13), primary (12), and adult programs (8).

C. The responses to the factors that would help facilitate the use of tapes to a medium and large degree were twenty-six (26) for a single catalogue of audio tapes, thirty-one (31) for a clearing house (center) for distribution, twenty-seven (27) for more tape recorders (playback equipment), and twenty-five (25) for a decrease in cost of duplicates.

D. The factors rated as being medium and large detriments to the use of tapes were lack of sources (28), lack of information about programs (30), lack of knowledge as to how to use tapes (25), and lack of playback equipment (27). The unwillingness of teachers was noted by half to be a medium or large factor, but noted by the other half of the respondents as being a small factor.

IV.

A. The median number of teachers having one tape recorder available among them is about six at the elementary level and about six at the secondary level for those replying (24).

B. Although twenty-six schools (26) reported they did not now have a dial system, twenty (20) indicated they expected to have such a system in five years.

Twenty-eight (28) of the thirty-one (31) schools said they had study carrels and twenty-seven (27) noted that they expected to expand present numbers.

Twenty-seven schools (27) said they could duplicate tapes and twenty-four (24) expected to expand their duplicating facilities.

D. The comments by individual schools on the impact on the use of audio tapes by individualization of instruction and/or independent study and/or dial access systems and/or CAI have been included in Appendix D. To illustrate the typical reaction to this inquiry the following is quoted from Lamphere Public Schools in Michigan.

> "The use of audio tapes has increased 300% in our district in the last three years as a direct result of both individualized instruction and independent study. The establishment of a reading department

with district consultants to work with teachers on reading programs K through 12, has had the greatest effect on the production and use of individualized instructional tapes at every level. An ungraded high school program has further emphasized the need for audio programs to meet the needs of students in the five phases of the program as well as those students pursuing an independent study program. The establishment of a central Instructional Materials Center for the production and distribution of audio tapes has increased utilization of these materials."

D. Of the recommendations as to the kinds of services offered by state departments of education, universities were for state departments to service clearing houses for information, as a duplicating service, and evaluation centers. Universities were rated high in each area except, like state departments, as single subject centers. The idea of a national center as clearing house of information and for evaluation was noted to be appealing to over half of the respondents.

E. & F. Twenty-two of the respondents indicated they would make their tapes available to a national center for audio tapes. One school checked "no" for this question.

Preference for means of making tapes available was slightly in favor of selling tapes, followed closely by a one for one exchange of tapes.

Procedure H:

Visitations were made to several libraries based on initial information that indicated these libraries were interested and capable of operating an audio tape distribution center of some magnitude. Contact and informal sessions were held with an evolving group known as the Association for Recorded Sound Collections.

These visitations showed several institutions to have both the interest and personnel to cooperate in a distribution system for audio tape programs as well as the technical equipment required.

Procedures for duplicating and storing tapes varied from one center to the next. The general kinds of agreements reached are reflected in the Guidelines for Audio Tape Libraries. It is expected that copies of these Guidelines will be available with this report.

A few of the institutions thought to have an audio tape duplicating capability, did not in reality. Their hope was commendable and with the advent of a system resulting from the next phase of their study, they may well have the justification they need to acquire duplicating facilities.

The need and desire for establishing a nationwide distribution system was expressed with enthusiasm at every library visited. This need was justified on the demand for varied programs of good quality and that they were appropriate for use in educational settings. The specific type of programs desired varied widely and was dependent on the particular situations.

Procedure I-J:

A conference was held in conjunction with the DAVI Convention. Previous project conferees were invited along with a selected but very limited number of supervisors of large libraries. One meeting was held with the advisory committee of the National Tape Repository. The setting also allowed for a wider exchange of ideas and problems related to audio tape libraries.

The prime problem is that of acquiring new audio materials. Sources must be identified and the paths of exchange developed and maintained. Once the materials have been located, selection becomes an individual library concern. The more varied and the larger the school population served will be relfected by the kinds of selections to be made.

Evaluation is most difficult to pin down. Suggestions have been made for elaborate committees that would check for content evaluation. The solution that appears to hold promise is to have those persons responsible for an area of curriculum do an initial evaluation that would be validated by actual use. The user is thus the final evaluator.

Technical evaluation is readily verified and can be handled by most tape library technicians assuming time is provided. Guides have been suggested for procedures that will tend to ensure technical quality for audio tape libraries.

Distribution of materials becomes basically a matter of having information available to locate programs. Thus there is a need for cataloging with adequate descriptions and for the catalogue to be distributed. Distribution ties in very closely with acquisition. The means of distribution, say through regional centers, can become the channels for acquisition of new programs. Details are given in the description of the feasibility of a coordinated

distribution system that follows. This description, in the main, has been submitted to the U. S. Office of Education as the proposed Phase II of this study.

The first phase of this study has vividly shown that:

(1) The use of audio tapes is expanding rapidly at all levels of education.
(2) There is currently a limited number of tape titles available at any given institution.
(3) There is no individual tape library in the nation capable of meeting the increased demand for audio taped materials.
(4) There is no systematic exchange of tapes.
(5) There is no systematic method of securing new programs.
(6) THERE IS A NATIONWIDE NEED TO ESTABLISH A COORDINATED DISTRIBUTION SYSTEM INCLUDING ACQUISITION OF NEW PROGRAMS.

In 1962, the university of Colorado conducted a survey to identify the existence of audio tape libraries in educational institutions and agencies in the United States. This survey indicated that there were only forty-two educational tape libraries in the fifty states. The initial phase of this study for a coordinated system of distribution identified 731 educational tape libraries and via the questionnaire, 340 libraries have been verified. Even with a reasonable allowance for error in the 1962 survey, the rate of growth is phenomenal. These approximately 340 libraries are noted to be attempting to expand their services due to demands placed on them. In addition, the consistent reply to our inquiries as to the greatest need of these libraries has been for more and varied sources of good audio tape programs.

The open end question as to the future use of audio tapes was answered in a positive manner by nearly every case verifying the expanding use of audio tapes. All comments, both positive and negative, are listed in Appendix D with the name of the institution of the respondent. The reader is asked to read these comments as they were received.

The responses to Section Three, question II of the questionnaire sent to institutions already engaged in distributing audio programs, indicates the expected amount of increase (predominately 25 to 50% increase at the elementary and secondary level and the same for our 4 year colleges) in the use of audio tape.

The results of the instrument sent to light-house public schools, which may or may not have been using audio tapes, show

that 29 out of 30 schools (question III A) foresee an increase in use of audio tapes. Part B of the same question reflects a need for a wide range of programs to meet the demands of a variety of types of presentations at all grade levels.

Phase II of this project is necessary so that: The background of experience, the contacts made, the data collected, and the expenditures made can be utilized and not wasted. In order to maintain continuity, it is strongly urged that a high priority be given this project.

It cannot be over-emphasized that although Phase II is identified as a system of exchange for audio tapes, the system could very well be the basis of exchange of a wide variety of instructional materials.

The expanding application of audio tapes for educational purposes has been and is being demonstrated in many ways.

Where established tape libraries have not organized to update their holdings, the demand for tapes has consistently reached a peak and then fallen off to a very low level. This is the usual case. This latter category of tape libraries have admitted that there is a demand for audio tape programs, but they have not as yet found a way to secure a system for up-dating their collection. With only one or two exceptions, the University Tape Libraries throughout the country are interested in developing a method of securing and exchanging audio tape programs. This fact is attested to by the interest in exchanging tape programs as shown by 185 out of 215 (Section Three, question II E), or 85% of the respondents are anxious to secure new tape programs.

In November of 1966, the first phase of this study convened a conference of persons concerned with the problem of audio tape distribution. Appendix I is a listing of those attending. The consensus of this group was that there is definitely a need for a national distribution system. It was recommended by this conference that a model for distribution be designed and implemented in Phase II of the study.

This group also recommended that the future phases of the study consider only those libraries interested in making taped materials available to users outside their own institution. The project should be limited to audio tapes of the verbal mode.

Although many educational tapes have been produced and will continue to be produced in a wide variety of formats, such tapes will be utilized only if their quality is maintained and their

curricular application and availability are made known. There is a minimum of exchange of information regarding the availability of tape recorded programs between tape libraries. The study to-date has shown that over 80% of the tape libraries do not make catalogues available outside their institution, and in our study only 14 libraries make their program available across the country. As the amount of material produced on audio tape is increased, the need for an organized system for making them available in increased.

Again the better reference is the reaction from the field as to the need for a distribution system. Thus, the reader is asked to review Appendix D which lists the reactions from all levels of education. It seems most apparent that nearly all references are highly endorsing a distribution system.

The demand for audio tape programs stems from several factors. The elementary and Secondary Act of 1965 under Title I has made possible the acquisition of recorded materials; Title III authorizes the development of tape recording facilities and magnetic tape libraries. The National Defense Educational Act and the Higher Education Act both provide for the purchase of equipment including tape recorders, playback equipment and distribution systems. It is obvious that the recording and duplicating equipment (hardware) will not serve a useful function without adequate programs (software). The light-house schools indicate a predominate concern for sources of audio programs and that it is not an unwillingness on the part of teachers that restrict the use of audio programs. This reaction is similar for respondents from schools designated as having tape libraries.

The awareness on the part of educators to the necessity of providing instructional materials on an individual basis is and will increasingly place a heavy demand for audio tape programs. Direct application of tapes for instructional use is wide-spread in school systems of all sizes. This use is typified by the following quote from the Tape Teaching Project Report issued by the Norwalk, Connecticut School System sponsored by the Ford Foundation: "Taped lessons offer many advantages to the teacher. They serve to make more economical use of teacher time and provide instructional materials which can be developed for varying levels of pupil's achievement. Tapes yield a flexibility in grouping and subject matter which fosters individualized instruction." The value of using recorded lessons for the improvement of instruction seems limitless. Experienced teachers recognize that tape teaching can be a valuable teaching aid and <u>they are using it more and more each year</u>.

The Norwalk Curriculum Materials Center duplicates and sends out to teachers from 60 to 100 taped lessons each week.

The center for Research in Educational Media Design findings support the advantages of using audio tape in reports in such studies as: the three year study at Westside Junior High School in Omaha, Nebraska for teaching spelling by tapes, and the Effectiveness of Instructional Tapes for Changing Regional Speech Patterns, Michigan, 1962.

The application of audio tape programs could be elaborated on at length in conjunction with the rapid expansion of remote dial select systems that are spreading across the country. It is obvious that such systems provide a high degree of flexibility that will utilize a wide array of audio materials. The reader is urged to refer to the responses received in Appendix D.

The initial phase of this study has provided the staff with many occasions to discuss a distribution system for audio tapes with educators across the country. At almost every encounter, the response has been that an organization for the exchange of information and material is sorely needed. A list of responses from the field is given in Appendix E. The idea has been expressed time after time that if a system can be developed for distribution of audio tapes, then such a system can be expanded and/or modified to meet the increasing demands for other kinds of instructional materials.

There are three primary areas of consideration for a tape distribution system: (1) cataloging and dissemination of descriptive information; (2) a common coding and indexing system to utilize computer capabilities; and (3) a system of organization (model) to distribute audio tape programs and to retrieve (feed back) through the system the new audio tape programs being developed so they can be redistributed wherever the need for them exists. There are many factors affecting these three areas that will have to be worked out in the second phase of this study, such as copyright release techniques, evaluation formats, publication of programs of instruction using audio tapes, standards of recording, etc.

The study staff has been working closely with the DAVI Task force set up to study cataloging needs for educational media. Along with the development of cataloging formats is the need for coding and indexing materials to provide instructors with an adequate means of locating appropriate materials for a given instructional program unit. The development of such material for audio tapes is generally agreed to have been most neglected and in need

of finite direction. The development of a catalog for audio tapes could be accomplished in cooperation with the Department of Audio Visual Instruction, National Association of Educational Broadcasters and the more recent National Information Center for Educational Media. The format developed must be such that the computer can be utilized for storage and retrieval of information regarding audio programs, for the internal operation of audio tape libraries; for the fast up-dating of information describing the latest available materials and incorporating them in a distribution system. Appendix F contains comments from the field regarding this aspect.

The proposed second phase of this study seeks to find the means of achieving an effective and efficient system of distribution (and securing) of audio programs. To date, the study has identified a nucleus of existing libraries that are experienced and anxious to develop a coordinated system of distribution. Studies such as the Oregon State System of Higher Education Project of exchanging information among institutions of higher education and the study at Syracuse for a film distribution system for the State of New York have been examined regarding their implications for a national distribution system for audio tapes. The evolving system of audio tape distribution by the Texas State Education Department has also been investigated. Consideration has been given to commercial organizations for distribution, as well.

On-the-spot visitations to several libraries of tape collections involved discussions as to how such a system might be organized. The director of the initial study has been convinced that the necessary equipment and enthusiasm is present at San Francisco State College, the University of Colorado, the University of Iowa, State University of New York at Buffalo, and Syracuse University to provide the core of libraries needed for the model described below. This model is endorsed by these institutions and has been reinforced by the responses to the attached questionnaire (Section three; II-D). Preference is for a national center organized around regional university centers. Over 84% or 207 of the respondents to this questionnaire indicate that they would make duplicates of their tape collection available to a national distribution system.

Inherent in the proposed model below is the tremendous value received from the dissemination of information concerning the use of audio tapes and the techniques for handling recordings. The involvement of people is basic to this project. Those people that are involved become the network of dissemination. If the idea and the system itself are not carried to the people who make it operational, the project will falter.

PROPOSED

Based on the indicated need and problem described above, funds are requested to implement, and modify as needed, the following model for a coordinated system of distribution of non-commercial audio tape programs other than those readily identified with foreign languages or strictly music.

DESCRIPTION OF MODEL FOR COORDINATION OF DISTRIBUTION

Based on the acceptance and information encountered over the past several months as the result of our inquiry into the feasibility of coordinated distribution, the following model description seems most workable.

1. The 50 states are to be divided into regions with as much geographic continuity as possible. Each region would serve a population from ten to eighteen million people.

2. Each region is to have a center for collecting, selecting, and forwarding audio tape programs to the National Tape Repository. The repository would in turn distribute duplicate copies to each of the other regional centers.

3. Each regional center would be capable of, (a) duplicating and distributing audio tape programs, (b) identifying and maintaining high technical quality, (c) storing and efficient retrieving of tape recorded programs.

4. In cooperation with other regional centers, each regional center would agree to:

a. Standards for

(1) recording and duplicating
(2) cataloging (code and index).

b. A national catalogue to include the total listings and to distribute the catalogue within its region to educational institutions and other interested patrons.

c. Develop and implement an organized system for securing appropriate programs from educational institutions and agencies within their individual regions.

5. A cooperative arrangement between centers for the exchange of programs within each region and with the National Tape Repository.

6. The National Tape Repository would agree to assist in making additional duplicate copies for regional centers during high peaks of demand.

STEPS IN PROCEDURE

To implement, modify and evaluate the model described above, this proposed phase of the project would:

1. Identify and secure an agreement with Tape Libraries that would and could serve as a Regional Center.

2. Draft an outline of operational procedures, forms, evaluation, and distribution techniques for regional centers.

3. Hold a four-day conference at the University of Colorado in late fall (October or November) consisting of the Director of the Regional Centers (estimated to be 12); two members of NAEB and NER; two members of DAVI; two members of the Association for Recorded Sound Collections; Director of NICEM and the Project Staff. This conference would be devoted to reviewing the draft outline described in (2) above as a basis for determining:

   a. Operational procedures between (1) the Regional Center and educational institutions and other agencies within the region; and (2) the Regional Center and the National Tape Repository.

   b. Cataloging techniques of classifying by subject areas and alpha codes.

   c. Review and recommend library operations for storing, duplicating, billing, and recording user information.

   d. Develop a "letter of agreement" for Regional Centers and the National Tape Repository.

   e. Determine a time-table to implement the proposed model for distribution of Tape Programs.

4. Follow-up of the Fall Conference with spring and Fall visitations by the Project Staff to Regional Centers for the purpose of:

   a. Evaluation procedures, techniques and standards, and thus make recommendations as needed.

   b. Meeting with representatives of Audio Tape Libraries

in the region to work out details of encouraging and securing tape programs, local evaluation techniques, description of tape programs, and determining the effectiveness of the model at the regional level.

5. While the model for distribution is being implemented, persons on the project staff would compile a master list of Tape Programs available from the tape libraries identified in the initial phase of the study and up-dated by this proposed phase of the study. This list would, as information allows, include annotations of the individual tape programs.

6. During the second Fall and Winter, design and develop a National Tape Catalogue using an appropriate system of coding, indexing and annotating of the audio tape programs available through the distribution system. This would be done in cooperation with DAVI-NAEB National Tape Repository which would be responsible for the printing and distribution of the catalogue.